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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,781	04/14/2004	Arthur Earl Colvin JR.	2232-203	4694

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EXAMINER	
TANINGCO, MARCUS H	

ART UNIT	PAPER NUMBER
2884	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/823,781	COLVIN ET AL.	
	Examiner	Art Unit	
	Marcus H. Taningco	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-100* is/are pending in the application.

4a) Of the above claim(s) *28-100* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/25/04,2/18/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 28-100 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/11/05.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacs et al. (US 5,833,603) in view Anderson et al. (US 6,867,051).

Re claim 1, Kovacs discloses an implantable photosensor comprising indicator molecules **56** and **58** that emit fluorescence in response to illumination by an optical emitter **60** wherein the emitted fluorescence is detected by photosensors **62** and **64**. Regarding the steps of determining the amount of ambient light reaching the photodetector after ceasing illumination, and subtracting the second determined amount from the first determined amount, although not specifically disclosed by Kovacs, those skilled in the art appreciate that ambient/background subtraction processing techniques are well known in the art in order to improve the accuracy of measured readings. Anderson, for example, discloses steps of taking a "dark" reading and subtracting the reading from the "light" reading to compensate for the effects of ambient light (Col. 25, 14-26). Therefore it would have been obvious to modify the method suggest by *Kovacs* so as to further include steps of ceasing illumination, and subtracting the second determined amount from the first determined amount in order to allow for determinations with improved accuracy. Regarding the order of the determinations, although Anderson discloses that the dark reading is the first reading, those skilled in the art appreciate that, absent some degree of criticality, the order of the two determinations would have been a matter of routine design choice that would have been within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Re claim 2, Kovacs discloses a transponder **33** to transmit signals corresponding to an output of the detector system to a sensor reader **38** (Fig. 1).

Re claim 3, Anderson teaches in the method taught by Anderson and Kovacs, an external sensor reader (Fig. 6) wherein said sensor reader comprises a processing unit that determines the

amount of ambient light by subtracting a first determined amount of light emitted from a device from a second determined amount of light emitted from said device (Col. 35, 1-43).

Re claim 4, Anderson teaches in the method taught by Anderson and Kovacs, a control circuit that controls the on and off operation of the LED (Col. 25, 34-37).

Re claim 5, Kovacs teaches an LED light source **70** but fails to specify the amount of current driving said LED. It would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the LED with 2 milliamps of current in order to turn on said LED.

Re claim 6, Anderson teaches in the method taught by Anderson and Kovacs, a control circuit to read the photodetector output (Col. 8, 10-23).

Claims 7-15, 17-23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacs in view of Striepeke et al. (US 5,672,881).

Re claims 7, 10, and 11, Kovacs discloses an implantable photosensor comprising indicator molecules **56** and **58** that emit fluorescence in response to illumination by an optical emitter **60** wherein the emitted fluorescence is detected by photosensors **62** and **64**. Kovacs is silent with regards to the specific requirements of determining the amount of ambient light reaching the photodetector. Striepeke teaches a method comprising positioning a detector to detect a first fluorescent emissions from a sample illuminated by a light source (activating the light source), ceasing illuminating the sample and detecting a second fluorescent emissions from the sample, then subtracting the second fluorescent emissions value from the first fluorescent emissions value (Col. 3, 1-24), wherein the fluorescent emission values detected are integrated

over the exposure time and then read out into an AD converter and converted to digital form (Col. 3, 54-67), thus providing a function of the intensity of the light striking said detector. Those skilled in the art can appreciate compensating for background noise, thus it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Kovacs with the method taught by Striepeke in order to determine a correction value for background compensation.

Re claim 8, Striepeke teaches in the method taught by Kovacs and Striepeke, means for acquiring a darkfield value and subtracting the darkfield value from the illuminated signal (Col. 3, 1-16) but fails to specify a sensor reader. Sensor readers of the recited type are well known in the art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination taught by Kovacs and Striepeke to provide background compensation.

Re claim 9, Striepeke teaches in the method taught by Kovacs and Striepeke, means for acquiring a darkfield value (first signal) and subtracting the darkfield value (second signal) to yield a darkfield corrected signal (third signal) (Col. 3, 1-16).

Re claim 12, Kovacs teaches an LED light source **70** but fails to specify the amount of current driving said LED. It would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the LED with 2 milliamps of current in order to turn on said LED.

Re claims 13, 14, and 18, Kovacs discloses an implantable photosensor comprising indicator molecules **56** and **58** that emit fluorescence in response to illumination by an optical emitter **60** wherein the emitted fluorescence is detected by photosensors **62** and **64**. Kovacs

further discloses a method for background compensation (Col. 11, 55-65) but is silent with regards to the specific requirements. Striepeke teaches a detector to detect a first fluorescent emissions from a sample illuminated by a light source (activating the light source), detecting a second fluorescent emissions from the sample when the sample is not illuminated (Col. 3, 1-24). Those skilled in the art can appreciate compensating for background noise, thus it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Kovacs with the method taught by Striepeke in order to determine a correction value for background compensation.

Re claim 15, Striepeke teaches in the method taught by Kovacs and Striepeke, means for subtracting the second fluorescent emissions value from the first fluorescent emissions value (Col. 3, 1-24).

Re claim 16, Kovacs discloses a transponder **33** to transmit signals corresponding to an output of the detector system to a sensor reader **38** (Fig. 1).

Re claim 17, Kovacs teaches an LED light source **70** but fails to specify the amount of current driving said LED. It would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the LED with 2 milliamps of current in order to turn on said LED.

Re claim 19, Kovacs discloses a housing **44** for housing said photosensors **62, 64** (Fig. 3).

Re claim 20, Kovacs discloses indicator molecules **56** disposed on an outer surface of the housing **44**.

Re claims 21-23, Kovacs discloses an implantable photosensor comprising indicator molecules **56** and **58** that emit fluorescence in response to illumination by an optical emitter **60**

wherein the emitted fluorescence is detected by photosensors **62** and **64**. Kovacs further discloses a method for background compensation (Col. 11, 55-65) but is silent with regards to the specific requirements. Striepeke teaches a method comprising positioning a detector to detect a first fluorescent emissions from a sample illuminated by a light source, ceasing illuminating the sample and detecting a second fluorescent emissions from the sample, then subtracting the second fluorescent emissions value from the first fluorescent emissions value (Col. 3, 1-24), providing a third signal wherein the fluorescent emission values detected are integrated over the exposure time and then read out into an AD converter and converted to digital form (Col. 3, 54-67), thus providing a function of the intensity of the light striking said detector. Those skilled in the art can appreciate compensating for background noise, thus it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Kovacs with the method taught by Striepeke in order to determine a correction value for background compensation.

Re claim 24, Kovacs discloses a transponder **33** to transmit signals corresponding to an output of the detector system to a sensor reader **38** (Fig. 1).

Re claim 25, Kovacs discloses a housing **44** for housing said photosensors **62, 64** and said light emitter **60** (Fig. 3).

Re claim 26, Kovacs discloses indicator molecules **56** disposed on an outer surface of the housing **44**.

Re claim 27, Kovacs teaches an LED light source **70** but fails to specify the amount of current driving said LED. It would have been obvious to one with ordinary skill in the art at the

time the invention was made to provide the LED with 2 milliamps of current in order to turn on said LED.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsumono et al. (US 5,302,393) discloses an implantable sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT

CONSTANTINE HANNAHER
PRIMARY EXAMINER